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VOL. XXIX, No. 15. JULY 21, 1932

THE JOURNAL OF PHILOSOPHY

THE INADEQUACY OF THE HEDONISTIC INTERPRETATION OF PESSIMISM

IT is a matter of some interest that pessimism should not have been treated systematically until the coming of Schopenhauer. When one examines the literature of more or less philosophic treatments of pessimism, one finds that it was Schopenhauer who, through his arresting masterpiece, stirred up most of the interest in the discussion of pessimism. Not only in Germany, but likewise in France and England, defenders of the optimistic faith arose who sought to demonstrate that, after all, life was worth living.

To us to-day it may seem rather surprising to discover how large a place in the subsequent discussion of pessimism was given over to a consideration of hedonism. In the English language perhaps no more ambitious attempt at refutation was made than that by James Sully in 1877. Though Sully gives a rather wide interpretation to pleasure, and though he recognizes qualitative differences among pleasures themselves, he obliges his readers to wade through long and often dreary discussions, calculated to show the absurdity of arriving at pessimistic conclusions by maintaining that pains and suffering greatly outweigh pleasures. Since Sully was himself a psychologist, one might perhaps understand why so much space should be given over to a consideration of the psychology of hedonism in attempting to refute pessimism. But not only men of Sully's generation interpreted Schopenhauer's pessimism as based on hedonism, but modern critics like George Simmel, in his *Schopenhauer und Nietzsche,* and Johannes Volkelt, in his *Arthur Schopenhauer,* and James Ward, in his *The Realm of Ends,* give great prominence to their analysis of Schopenhauer's pessimism as being essentially hedonistically grounded. Now, it must be admitted that Schopenhauer can not wholly escape responsibility for resolving pessimism into a simple matter of hedonistic calculation. More than once Schopenhauer asserts that, if any man were to compare the sum of his pleasures with those of his pains, he would begin to see, in terminology borrowed perhaps from Schopenhauer's earlier experiences in the counting house, that life was bankrupt, that the receipts of pleasures would not begin to balance the expenditures of

pains (*W. W. V.*, II, p. 658). But it is necessary to distinguish between Schopenhauer's empirical, or *a posteriori*, argument for pessimism and his metaphysical, or *a priori*, argument. It might be admitted without further ado that, when Schopenhauer speaks of the empirical proof for pessimism, hedonistic considerations are in the forefront, though those who seek to refute his hedonism by recourse to statistics are doomed to failure because, while Schopenhauer in one breath speaks of the possibility of reaching pessimistic conclusions by striking a balance between pleasures and pains, in the very next breath (II, 659) he asserts that the mere presence of pain in *any* form would make optimism impossible and establish pessimism. He cites Petrarch's famous line, "Mille piacer' non vagliono un tormento," which Michelangelo seems characteristically to have turned into "a thousand joys are not as good as a single torment." The painful and long extended demonstration, therefore, on the part of Schopenhauer's refuters that no statistics making inevitably for pessimism could be adduced, goes wide of the mark. But even more important than this is the further consideration that, after all, Schopenhauer's pessimism is essentially and systematically grounded in his diagnosis of the nature of reality as Will. Simmel and Volkelt both must admit that the difference between his empirical and his *a priori* argument is important. Schopenhauer does not say that the essence of Will is a restless search after pleasure. His Will is not the Will to *pleasure*, but the Will to *live*. Now, since Will is the essential reality in all of its manifestations; since it is *the* cosmic reality found in crystals as well as in trees, in the stars and the Milky Way, as well as in man, and since it displays itself by constant striving, it is in principal doomed, because, as Simmel points out, Will is all the reality there is, and it is therefore impossible for Will to set up for itself an object of desire other than itself. In its self-transcending efforts it must by its very nature always return to itself. Furthermore, Will is in principle non-rational; it is, therefore, purposeless and lacking purpose it is in principle doomed to strive after no purpose whatsoever. The Will is, if one may use the expression for an unconscious reality, a self-divided, unhappy solipsist. What rôle can pleasure play, except metaphorically, in such cosmic considerations? It is only in sentient being that striving after pleasure could arise, but sentient beings constitute but a part of Will's infinite objectivications. This metaphysical pessimism goes far deeper than any empirical observation could. No matter what ends even sentient manifestations of the will might set up, high or low, worthy or ignoble, frustration alone could result.

Were there space, it would be of interest to go more fully into the question as to what degree, or to what degree only, Schopen-

hauer's pessimism may justifiably be regarded as hedonistic in basis. But for the purposes of this paper it is of greater interest to indicate further that in any case and no matter how Schopenhauer's pessimism is grounded, it was, and is, an error on the part of his critics to believe that the refutation of Schopenhauer involves at once the refutation of pessimism as such. In the study of pessimism Schopenhauer does, indeed, deserve much attention; but no more than one historical, philosophical system can be regarded as identical with philosophy itself, can Schopenhauer's pessimism be regarded as constituting pessimism itself.

Pessimism is an extreme word; its attitude is extreme. It has for that reason often been rejected, along with optimism, in favor of a more moderate term and attitude like meliorism (James Sully, James Ward). But the very extreme emphasis is a necessary part of its character, for all of its appearing to a man like Santayana like an impertinence. This extreme aspect will be seen to have for its correlative an extreme worth that has been denied. Now, extreme worths are not at all unusual in discussions of ethics. Is not the supreme good, the *summum bonum*, that which alone makes life worth living, an extreme itself? Pessimism is closely linked with the search after the highest good. Like a connoisseur of diamonds, the pessimist may at times seem despondent because there is an irremediable flaw in what otherwise might be most precious. If a definition for pessimism is desired, the following might be offered: pessimism is a judgment of value regarding life or reality as a whole, which results from the conflict between man's *supreme* value and the supposed facts of life.

Since pessimism concerns man's supreme value, it at once becomes evident that the position, that pessimism concerns merely the relative superiority of pleasures over pains, is far too simple. It is true that the history of Western philosophy from its very beginning in the early Greek days presents the important movement of hedonism which with various vicissitudes and in various guises extends down to our own day. Hedonism *is* an important ethical theory, and I should not wish to minimize its significance nor its perennial seductiveness. One need not, then, go so far as Nietzsche, who maintained "that no one seeks pleasure—only the English do that," in order to protest against the exclusively hedonistic interpretation of pessimism. If the definition just announced is acceptable, it must follow, without any necessity to labor the argument, that there are as many types of pessimism possible as there are supreme values which appear denied by reality. Each individual will, of course, strive in his own person to win for himself some organization of values in accordance with the supreme good. The individual trying

to make for himself a home in which his spirit can thrive, will of course not rest until he has found for himself a value which commands his greatest allegiance. But a student of pessimism, studying its various types with the eyes of an interested spectator, must for the moment eschew the task laid upon him also to decide for himself upon the supreme value among the various values that thoughtful human beings have selected as possessing most worth. If space permitted, it would be of interest to pass in review all the types of pessimism; those that have in the past harassed men's minds, and those which afflict us even at this time. It would seem that, for convenience of classification, one may study on the one hand, the perennial types of pessimism and on the other, those types which, though not unrelated to the pessimism of all the ages, nevertheless wear a modern aspect. Depending on where one finds one's highest values particularly frustrated, one may be pessimistic about oneself, about society, or about the universe in which one has been placed. It may be of some value to take a few examples in rapid review. The pessimism which results from the conviction expressed by Faust, "Dass wir nichts rechtes wissen können; Das will mir schier das Herz verbrennen" is, of course, very familiar. It is perennial, and may be discovered in much of the world's literature. If man is, as Aristotle defined him, "a rational animal," it follows that at least for some, cognizant of their unique status, a discovery of the rationality of the universe is one of the prime demands. The seeker after truth who comes back perpetually empty-handed and feels "that he evermore comes out the door that in he went," may well be pessimistic. On the other hand, should a person not lay great store by the possession of knowledge or truth; if, in other words, truth is not valued as a supreme good, pessimism would not invade that person's life. Then, there are those who regard personal perfection and virtuous conduct as man's highest aim and end. If they should discover, as many writers in the field of religion have, that the good that they will, they do not; and the evil that they will not, they do, and that there is no possibility, as St. Augustine among others maintained, for man ever to achieve the virtuous life, it will be clear that these writers whom James called, possessed of "a sick soul," must of necessity be pessimistic until they are blessed with the conviction that, where man by himself can do nothing, through the Grace of God he may be yet saved. Readers of philosophy have been made acquainted with an attitude rather similar to this type of pessimism in Hegel's "unhappy unconsciousness." The demands laid upon man by his supreme good are of such a nature that they can not be lived up to. Again this type of pessimism naturally can never be found among those who do not

accept personal perfection as a good to be prized above all others. Is it cynical to say that this type of pessimism is perhaps more ancient than modern for all of our attention to inferiority complexes? Then, there is, of course, the type of pessimism which demands much of society. Society, when weighed in accordance with certain high standards, may be found wanting irretrievably. The pessimism resulting from society's unlovelinesses and inhumanities regards man's living together with man in justice, friendship, and harmony as the highest good. This type of pessimism is likewise found throughout all the ages, as satirists of human nature have often attested, but differing from the type just mentioned, we seem to be affected deeply by it just at this time when it would seem that mankind does not have heart or head enough to live otherwise than in open or suppressed conflict. Another type of pessimism, non-hedonistic in character, results when men, who expect life to be ordered rationally and purposefully, find themselves obliged to admit that man's career and destiny is subject to irrationality and chance, and that, as Schopenhauer maintained, there is rationality only in appearance, not in reality. ("Zu *sehen* sind diese Dinge freilich schön; aber sie *zu seyn* ist ganz etwas Anderes." II, 666.) Closely related and often merging with this type of pessimism is the pessimism which overcomes those whose supreme demand upon the universe is that man shall be free, and then feel obliged to regard the universe as denying all opportunity for significant human self-determination.

The foregoing examples of pessimism, non-hedonistic in essential characteristics, are representative of perennial pessimism. Contrasted with these perennial types there are modern varieties of non-hedonistic, pessimistic experiences which are attached to such aspects of science and the modern world that they could scarcely have arisen prior to the coming of certain disturbing scientific doctrines. I need only mention the pessimism that descended upon men from man's finding himself obliged to shift the center of his universe in accordance with the teachings of Copernican astronomy. In the field of biology, the doctrine of evolution, by denying design and purpose in the universe and by appearing to dethrone man from his pre-eminence among animals, robbed the world of its "soul of loveliness," and man of his ancient dignity. Then again, and more recently, the second law of thermodynamics plunged men like Henry Adams into deeply pessimistic thinking. Likewise, psychological determinism, resembling the denial of freedom of earlier days, but proceeding on different grounds, was not without its pessimistic repercussions. For the purpose of this paper, intended to show lamentable inadequacy of the exclusive, hedonistic interpretation of pessimism, I need only call attention to the tremendous chorus of pessimistic

utterances occasioned by the coming of the machine age, the machine which threatened like a monster, created by a Frankenstein, to crush out all beauty and creativeness from the face of the earth. To conclude with one more example of modern pessimism, there is the pessimism which shudders when confronted with the vastness of the present social world, too amorphous, too sprawling to be subdued by man with the best will and intelligence in the world into a semblance of harmony and reason. One need only think what a monstrous thing a modern state would have been to Aristotle.

It has not been my intention to give a complete survey of types of pessimism, though I believe that the more important and more conspicuous types have here been enumerated. Neither have I gone into the question of whether it would be possible or desirable to construct *a priori* a list of all the possible types of pessimism, after the analogy of what was done in chemistry when a list of all the possible elements was constructed, prior to their actual discovery. The only point I wish to bring home with emphasis, is that to reduce the discussion of pessimism to hedonism falsifies the issue. In fact, acquaintance with pessimistic utterances would rather seem to indicate that not rarely hedonism is a *product* rather than a *cause* of pessimism; men snatch at pleasure only when life otherwise is found empty. This is certainly distinctly the case in the philosophy of Omar Khayyam, who had much more serious and important values at heart before he enjoined man "to take the cash and let the credit go." The pessimism of hedonism is then often not primary but derivative, the frustration not of the best but of the second best, accepted only in desperation because the best could not be had. There is nothing heartily merry, as Chesterton loves to show, in the exhortation: "Let us live and be merry, *for tomorrow we are dead.*"

Should the exclusive hedonistic interpretation be rejected, as I hope I have given ample reason for doing, the whole discussion of pessimism would assume far greater interest and seriousness. As I remarked at the outset of the discussion, to one acquainted with the literature of pessimism and with the issues involved, it seems remarkable that, except for the literature of refutation of Schopenhauer's pessimism, there has been, considering the importance of the subject, relatively little serious consideration of pessimism among philosophers. Unquestionably, too, those who were not in sympathy with a view of life which made its values dependent upon the relative superiority of pleasures over pains, found pessimism a lamenting over trivialities. Here and there one finds voices like that of Josiah Royce insisting on the necessity of taking pessimism seriously, and of sound philosophy going through rather than around pessimism. The rejection of the hedonistic interpretation may,

therefore, do much to give to pessimism the consideration that it deserves. As a matter of fact, of course, underneath much metaphysical and even epistemological discussion there have been value-considerations of the sort involved in a discussion of pessimism.

It is not at all unusual for philosophers to conclude their discussion with the warning that any other philosophic attitude than that presented, would lead to despair. Let me quote from John Muirhead's recent book on *The Platonic Tradition:* "But I should be false to my own convictions if I did not add that, if they (idealistic principles) do not give us any final solution of the riddle of the universe, they can at least give us the assurance that we are working in the line of the great tradition of the Western World, and thus *save us from despair*" (italics mine, J. Muirhead, *The Platonic Tradition,* p. 441). It seems to the writer that it would be better frankly to face such pessimistic possibilities without trying to conceal that the questions underlying pessimism are among the most important of all. Renouvier well expressed this view by saying, "La vie ne peut avoir d'intérêt pour un penseur, qu'à la condition de chercher a résoudre le problème du Mal. La philosophie, la vraie philosophie serait celle qui nous apprendrait à vivre et à mourir."

The great diversity of types of pessimism naturally makes any attempt at refutation which proceeds as if there were no type other than the hedonistic often ludicrously irrelevant. To tell a man who is pessimistic about the success of man's passionate search after *truth,* that his search after *pleasure* was bound to be fraught with defeat, would be to yield to the dictates of unreason of some of Job's comforters. In much of the discussion of pessimism one has the feeling that the central issues are not touched at all. To tell a man who is filled with sorrow because life does not seem to be hospitable to what he has set his heart upon, that there are many pleasures still to be had, that birds are still singing, that the sky is gay, is as irrelevant as it would have been to have tried to console Mary over the loss of her Master by referring to sparkling sunshine and the gay laughter of children.

No, a recognition of the diversity of possible types of pessimism means that it is possible to investigate separately and, therefore, with much more clarity, the values and the facts associated with each. In general, it will then be seen that any intelligent approach to a particular type of pessimism must of necessity involve both a study of the underlying supreme value as well as of the facts and realities which presumably seem to go rough-shod over this highest value. Any attempt to overcome pessimism, then, of necessity would require either that the pessimist would be brought by himself or others to exchange his highest good for one that may find greater

hospitality in the world of reality, or that he would convince himself or be convinced by others that the facts of life have been erroneously conceived, and that they do not really contradict the highest good cherished so deeply by the pessimist.

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ON ZENO'S PARADOX OF MOTION

A RECENT discussion on the pages of this JOURNAL [1] of the celebrated paradox concerning Achilles and tortoise revives what appears to me to be a misunderstanding of the problem. The fact is that it is a mathematical, not physical, problem. The statement of it (in Burnet's rendition of a passage in Aristotle's *Physica*, vi. 9, 239b) reads as follows: "Achilles will never overtake the tortoise. He must first reach the place from which the tortoise started. By that time the tortoise will have got some way ahead. Achilles must make up that, and again the tortoise will be ahead. He is always coming nearer, but he never can make up to it."

As against Russell's criticism (*Principles of Mathematics*, I, ch. 42–43), I urge that Zeno's statement is not "directly contradicted by Arithmetics," for it does not presuppose existence of points, but only infinite divisibility of space and time. It is obvious, of course, as Mr. Ushenko says, that Achilles will overcome the tortoise "when both happen to be at the same place at the same time," but this is not an answer to the difficulties of the problem.

In regard to Bergson's objections (*Time and Free Will*, pp. 112–115), I contend that the problem is not "confusing space with motion," nor does it deal with two incommensurable motions, but with a single progressively decreasing distance between two moving points. Mr. Ushenko, therefore, is quite right in pointing out that the weakness of Bergson's argument is "that in asserting the incommensurability of two kinds of motion it fails to explain the fact that they can be compared."

But Mr. Ushenko himself seems to believe that the paradox can be solved by means of an imaginary four-dimensional diagram in which "when the world-line of Achilles and of tortoise representing their respective motions are drawn they are bound to intersect." True, but what of it? The answer states what common sense suggests, namely, that Achilles will catch up with the tortoise, provided he has enough time and provided the distance separating him from the tortoise is finite. But I can not see how this fact removes the difficulties of Zeno's paradox.

[1] "The Final Solution of Zeno's Paradox of the Race," by A. Ushenko, Vol. XXIX, pp. 241–242.

What all these thinkers seem to overlook is that the very statement of the problem is a self-defeating one, for it precludes the possibility of a positive solution. Indeed, the problem involves two decreasing magnitudes: that of distance and that of time. And because they are being continually divided by one and the same number, the process is necessarily infinite. As long as we pay attention to the changing distance alone, no solution can be found. But as soon as we come to understand that each decrease of distance is paralleled by a corresponding decrease of time necessary for Achilles and the tortoise to pass to the next of the successive positions in question, it becomes evident that we are dealing here with a constant, created by division of a spatial magnitude by a temporal magnitude. If we designate the distance between the original positions of A (Achilles) and T (the tortoise) as x and the time required for A to cover it is t, the fraction x/t is a quantity, constant and positive for all successive positions of A and T, at least as long as we divide both x and t by one and the same number, no matter how variable it be.

Although Aristotle's critical account of Zeno's paradox is somewhat obscure, I think that the above argument is essentially in agreement with his remarks in *Physica* where, among the rest, he says: "So while a thing in a finite time can not come in contact with things quantitatively infinite, it can come in contact with things infinite in respect of divisibility" (vi, 2, 233a). In creating his puzzling problem, Zeno has unconsciously introduced into it a double infinity, "for the divisions of time and of magnitude will be the same." His paradox does not prove at all that motion is impossible, nor that there is some mystery about motion, but only that finite magnitudes can be conceived as infinitely divisible.

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BOOK REVIEWS

Das Unendliche in der Mathematik und seine Ausschaltung. FELIX KAUFMANN. Leipzig: Franz Deuticke. 1930. x + 203 pp.

Philosophie der Logik und Arithmetik. HUGO DINGLER. München: Ernst Reinhardt. 1931. 198 pp.

Das Problem des Satzes vom Ausgeschlossenen Dritter. PAUL HOFMANN. Berlin: Pan-Verlagsgesellschaft. 1931. 45 pp.

The three books under review are of uneven merit. But they all testify to the dissatisfaction felt in nearly every quarter with the present state of the philosophy of mathematics. The outlook on the analysis of scientific concepts which found expression in Bridgman's

Logic of Modern Physics dominates many lines of philosophic inquiry in contemporary thought. The emphasis there placed on operations or procedures in the interest of making ideas clear is shared not only by the Peirce-Dewey theory of meaning, which always has been the champion of "operationalism"; it is being accepted by philosophers who otherwise have little in common. But operationalism is, for the most part, still only a program and the attempt to carry it through in various fields has much hard work ahead of it.

In mathematics the movement to exhibit the higher branches of the subject in terms of "operations" upon or relations between the integers, has been familiar for a long time under the name of the "arithmetization of mathematics"; although it is true that very important differences have arisen concerning the nature and significance of the "arithmetization." The great reforms which swept the "queen of the sciences" during the nineteenth century swept out the infinitesimals as "actual entities"; but they brought with them the transfinite numbers and the "actual infinite." The contemporary scene discloses the "actual infinite" attacked by those who wish to introduce the operational technique in full rigor into every branch of mathematics. And no one will gainsay that there certainly is still great need to interpret many mathematical concepts on the basis of well-grounded operations.

But advocates of reform have a way of persuading outsiders while leaving the professionals obdurate. How often have philosophical critics of the sciences convinced themselves that the use of certain notions, such as the atom, was "illegitimate," without hindering the fruitful employment of such notions in the science itself! Professional obdurateness may be only a bad habit or a consequence of vested interests. It is likely, however, that a genuine need is exhibited in the use of these "forbidden" notions, although the scientist himself may be altogether incompetent to offer the rationale for their use. One need only mention the name of Eddington or Jeans to illustrate the incompetence. And it is also likely that certain notions are forbidden, because a new dogmatism is substituted for an old one. It is the function of philosophy to analyse and interpret, not to legislate out of existence. It is safe to say therefore that the "actual infinite" and other mooted ideas will be abandoned, by professional mathematicians at any rate, only under the circumstances that the infinitesimals have been thrown into the discard: when it has been shown that nowhere does mathematical analysis require the actual infinite, or when the apparent use of the concept can be interpreted in terms of other, if more cumbersome, procedures.

It is the thesis of Kaufmann's very interesting though by no

means completely convincing book that just this can in fact be done. And because the thesis is so important and has received so little hearing, I shall confine myself in this review to a fairly full exposition of its main points. The notion of the "actual infinite" has arisen, Kaufmann believes, because the symbolic operations upon symbols which the mathematician performs have been misinterpreted and extended to domains where they are not defined. In substance, he is at one with the finitist view that ordinal notions are logically prior to cardinal numbers, that "infinite denumerable classes" can be employed without danger if "class" is properly interpreted, but that non-denumerable totalities and all theorems pertaining to them can have no place in a critically conscious mathematics. But it is Kaufmann's great merit to have developed these points without subscribing to other extreme and mistaken views of Brouwer, e.g., that the subject-matter of mathematics is the mental activity of the mathematician and that therefore the principle of excluded middle must be dropped; or that the *Entscheidungsproblem*, whether what are usually regarded as determinate problems have a determinate answer, is to be decided (strangely enough) in the negative.

Kaufmann centers his criticism upon the traditional notion of "class." The essence of the traditional view is that any collection of entities which have a "common property" is a class. He takes as his own the intuitionist thesis that "constructions" must replace postulation; that by a class in mathematics is to be understood a rule or procedure; that existence theorems which do not indicate the rule for determining or "constructing" a set of integers must be abandoned; and he justifies these dicta by borrowing from Husserl the "principle of transcendental idealism" according to which there can be no fundamentally unknowable facts. But surely these principles can not be regarded as characteristic of phenomenology, and they have been fundamental to philosophies at great variance in other ways with Husserl's school. Unfortunately, however, an adequate analysis of what is to be understood by the "knowable" or the "constructible" in mathematics has never been made. The lack is serious, and Brouwer's claim that mathematics is to be made up of "constructions" has therefore been dismissed by unsympathetic critics as unwarranted prejudice and subjectivism. Yet in fact the thesis of Whitehead and Russell that mathematics is logic, is in a sense a constructivist thesis, in which the primitives of logic are the intuited elements in terms of which all of mathematics is to be defined. The difference is that Kaufmann and the Brouwerians take the integers as the most assured intuited elements. In this, however, Whitehead and Russell, as well as Kaufmann, Brouwer, and Hilbert, are surprisingly *naïve* and unsatisfactory. Their quarrel

then becomes an interminable opposition between different prejudices, and the one genuine point at issue, whether premises which are logically prior in mathematics are also those on which we base our confidence in mathematics, is never fought out.

Kaufmann calls attention to an important distinction, which when translated into W. E. Johnson's language, points to the difference between a determinable and its determinate forms on the one hand, and a determinable and an instance of it on the other. On Kaufmann's view every integer is an ultimate determinate form of a determinable, and we must not suppose that we are dealing with the same sort of relation when we employ the phrases "properties or groups of spatio-temporal individuals" and "properties or groups of integers." He shows rather convincingly that transfinite cardinals are obtained by employing the latter phrase in the same sense as the former is employed, thus convicting the notion of transfinite cardinal of being nonsense. It follows that existence theorems of the form "there is a number which has the property *P*" can mean only an occasion or empty form for determining the determinate form of some determinable; and the phrase "there is" must not be taken to indicate a selection from an infinite aggregate of "individual" numbers.

Naturally enough, it is the counting process which on this view is the *fons et origo* of all mathematics. The integers are defined, very much as by Peano, as the formal structures of an unlimited counting process, so that the logical structure involved in the possible unchecked continuance of the counting process is precisely to what the notion of an infinite series of integers is equivalent. Hence the infinite series of integers is not an "actual totality" of individuals; nor an "actual becoming," since the temporal element in counting has been abstracted away; it is rather the domain or possibility of application of the formal structure exhibited in counting. An immediate consequence is that cardinal numbers can not be defined independently of ordinals, and that the cardinal number is what remains invariant when a collection is matched in some determinate way with a set of standard marks, e.g., the numerals. Cardinals must not therefore be hypostatized into "objects of a higher order"; they have not a mode of being independent of *all* operations of matching, although, since cardinals are invariants, they are independent of *any one* such operation. Hence the cardinal number of a class can not be the class of similar classes; it is simply the invariant under the matching or ordering operation. Everything depends, therefore, upon replacing the notion of class as a *collection* of objects having a common property by the notion of class as a *process* involving certain objects. When that is done, it is evident that the phrase "the class of all sub-classes of the class of integers,"

a concept very fundamental in defining the higher transfinite cardinals in classical *Mengenlehre*, is altogether meaningless.

It is not difficult for Kaufmann to show, by using long established analyses, that symbols representing fractional, negative, and irrational "numbers" are all incomplete symbols, so that they do not represent additional kinds of entities, but indicate determinate operations on integers. As a consequence, the well-known difficulties with "irrationals of higher type" no longer arise, and the axiom of reducibility is not required. And that, certainly, is a powerful recommendation for this approach. But the theorems concerning the continuum do not all lend themselves to such an "operational" analysis, and many of them must therefore be rejected. Thus, since the cardinal numbers have been defined as the invariants under certain ordering operations, it is meaningless to talk of the cardinal number of *all* the integers. For we can not in fact operate with infinite collections as we do with finite ones, and when we think we are operating with "infinite totalities" we are simply drawing the logical consequences from the rules of their construction. On Kaufmann's analysis, the usual interpretation of the proof that the integers can be set into one-one correspondence with a "proper part" of themselves, is therefore faulty. What the proof shows is that for every one of the integers there is, say, a corresponding even integer; to say that the "class of all integers" is similar to the "class of all even integers" must mean simply this correspondence. The proof must not be interpreted in terms of infinite "totalities," i.e., the "class of integers" must not be taken in extension, since the proof follows from the operational definition of classes, not from the rejected classical one. The infinite as a totality is thus a *façon de parler* which can always be given an unambiguous constructive reading only when the infinite is of the "denumerable" type. Ordinal notions are therefore of the very warp and woof of "infinite classes"; a "set" can not be "given" as an unordered totality for which a law is subsequently discovered; and "non-denumberable" sets must be a meaningless phrase.

But what about Cantor's diagonal proof that the "totality" of endless decimals is non-denumerable? Kaufmann tries to show that it proves nothing of the kind. And his reasons for doing so should be familiar by now: since the totality of the numbers in the continuum does not permit a constructive interpretation, such a "totality" depends upon using "class" in the rejected sense. Instead of proving that the continuum is non-denumerable, the diagonal "proof" shows that the "totality" of endless decimals can not be defined on the basis of a determinate procedure. Indeed, if an endless decimal is taken as a symbol for a denumerable set of integers "generated" by a rule, the diagonal proof simply indicates how,

from any denumerable set of denumerable sets of integers (i.e., the square array), *other* denumerable sets of integers can be obtained. It is the rejected sense of "class" which is at the bottom of the notion of "all endless decimals," and the bad habit of employing "class" in this sense is no doubt fostered by our apparent intuition of the linear continuum in geometry. If the "totality of endless decimals" is ruled out from mathematics, what remains of Cantor's work is the diagonal procedure and its consequences which do not involve the use of the rejected sense of "class," and the theory of well-ordered series as applied to denumerable sets.

To all of which a Cantorian may reply: "*If* you postulate that classes must be defined constructively (assuming that you can give an acceptable account of constructive definitions) it does indeed follow that non-denumerable sets are tabu. But why should I accept this postulate? I know, of course, that certain contradictions result if the old sense of class is retained. Nevertheless, the old sense of class does enable me to develop a very exciting branch of mathematics, and I shall try with all my might to guard against the contradictions. Indeed, in part I have already succeeded. I accept the non-constructive use of class, because I can develop a far-reaching and consistent doctrine. If "mere consistency" does not please you, so much the worse for your prejudices. So begone with your prohibitions!"

But, however this may be, the complete acceptance of Kaufmann's analysis must wait upon the detailed working out of his suggestions for the various portions of mathematics. Ideas on these matters are still in the flux, and it is to be noted that no systematic treatise has been produced by followers of Brouwer. It is easy, but also dangerous, to dismiss the finitist claims as inchoate and absurd. Kaufmann's book does indicate, however, the great promise of this position, and no student of the foundations of mathematics can afford to neglect it.

Dingler's latest book is of much less merit, and consists in showing that the voluntaristic apriorism which he represents can account for the formal sciences of logic and arithmetic. Dingler's philosophy coincides in part with American instrumentalism, and it is somewhat ironical that he is apparently not read in this country. It is true that he has an unfortunate manner of claiming to have anticipated everybody and of publishing each of his numerous books with the air of "now-the-truth-is-finally-revealed." But he has some very interesting suggestions for interpreting the propositions of logic and mathematics as symbolized plans of action, and as prescriptions for controlling the flux in the interest of "preserving the race." This thesis is most clearly stated in a preceding book, *Das System,* but it

is central to the present work as well, and on the basis of it he offers some searching criticisms of Russell, Carnap, and other formalists.

Dingler's chief concern is with the relation of the abstract formulae of mathematics and logic to the qualitative common day world, a question which he rightly asserts to have been left unanswered by Hilbert and others. Since the control of the flux requires a set of unambiguous, univocal concepts, each of which is a plan of action, the three so-called laws of thought are employed to define the univocality of a concept. Hence the laws of thought represent our resolutions to construct determinate modes of action, and they are grounded in man's phenomenal *will* to be rational, i.e., to dominate his environment. The entire rational "account" of nature, on this view, is nothing but a system of directed operations.

Such directed operations require precision, however, and they are therefore symbolized by a set of marks so devised that they are capable of being treated as a calculus. But a calculus can be developed only at a rather advanced stage of thought, when all kinds of relations have been discriminated by *manipulating* physical bodies. The marks symbolizing these operations can now be treated on their own account, and the laws of thought employed to define unambiguously marks of different complexity. Nevertheless, as Dingler correctly points out, it is a complete mistake to convert the possibility of such a self-contained treatment of marks into a Platonic metaphysics, and to believe that any such calculus, say a logistic system, is more fundamental than any other discipline. What is fundamental, according to Dingler, is the whole procedure employed in making our ideas determinate. Hence the position of Carnap, that all we can know of nature is its formal structure expressible in purely logical terms, must be mistaken; for those formal relations are the end-products of prior activity carried on in a qualitative world, and represent a temporal series of possible operations (pp. 65–74). The knowledge of relations with which logistic deals is determinate in virtue of our having performed all sorts of experiments; after we have won them by arduous work it is easy to employ them in a calculus. Only if that prior activity is neglected, is it at all plausible to postulate a realm of self-subsisting relations. Similar remarks hold for Russell's class interpretation of number. Thus all of Dingler's criticisms have their source in his insistence that scientific objects are manufactured (i.e., *made* determinate) and are not found ready made.

It is obvious that arithmetic as a calculus can be defined in terms of manipulating marks on paper, and Dingler shows in detail how this can be done. Infinite series are defined as the domain of possible mark-productions, so that on his view also infinite totalities can not be defined as "given" or "actual." However, his "proof" that the

formal calculus he thus obtains is consistent depends on his employing the notion of "any mark"; and it is clear that he must thus admit the introduction of the denumberable infinite. He finally offers a very curious formal treatment of infinite series in which quantitative notions and the concept of limit are not employed. Hence Dingler is unable, on the basis of the procedure of this book at any rate, to deal with the usual questions about infinite series, e.g., convergence, and most of the mooted points in the contemporary controversy in mathematics are necessarily excluded from consideration.

In spite of the suggestiveness of many of Dingler's remarks, his main contention is never established. If the "laws of thought" are grounded in our will to be unambiguous, how is it that they of necessity turn up on every hand? Is it not because the laws refer not to our resolutions, or at any rate not *only* to our resolutions, but to the formal traits of things? And if they do so refer, must not other logical principles be placed on the same plane as the three laws? And is anything gained by substituting the order in which we get our knowledge for the order which is revealed when we do finally manage to know? Moreover, Dingler wishes to find a basis for scientific procedure which is to serve as an absolute material *a priori*, and which is to be subject to no modifications in the light of increasing knowledge. That is the *raison d'être* for his insistence that Euclidean geometry is the only possible unambiguous way for coördinating our experience of spatial relations, or that mechanics, and in particular Newton's system, is the only univocal foundation for physics. To go the way of Dingler in these respects is to go counter to everything that may be learned from the history of science. For science is undeniably circular, and renounces in its practise any theory of science which asserts that we must begin with indubitable principles. Science is circular in the sense that it employs principles to interpret the "given," and yet the "given" is used to suggest and verify the principles. It is therefore not absurd to develop a theory on the basis of certain assumptions, say concerning geometry, and then to revise those assumptions in the light of the theory. In the interest of winning security against every future alteration in the structure of science, Dingler has accepted a dogmatism which is as sterile as it is unconvincing.

Hofmann's essay is a reprint from the *Kant Studien*. It has all the faults and virtues of the method which expects to throw light upon problems of specific subject-matter by examining the relations of subject to object and the variations upon that familiar tune. In spite of this approach, however, Hofmann makes the valid point that the principle of the excluded middle is applicable only if the alternatives considered are each significant for the subject-matter examined.

The sentence "Christmas is blue" is without significance, because types or categories are confounded; and the sentence "Christmas is either blue or not blue" is equally without sense, and not a significant application of the principle. The principle does express correctly the nature of all determinate characters as such; but unreflective application of the principle may nonetheless produce nonsense. Hofmann therefore believes that in so far as a character of some possible object is not involved in the constructive rule which defines a series of such objects, it is not true that such a series either does or does not possess such a character. Hence he concludes with Brouwer that since an infinite series can not be determined in all of its characters by a constructive rule, the principle of excluded middle is not always applicable. All of which, in the absence of an analysis of "constructive rule" is saying very little indeed.

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Scientific Inference. HAROLD JEFFREYS. New York: The Macmillan Co. 1931. vii + 247 pp.

The series of great books by Duhem, Campbell, Mach, Poincaré, are examples of what may be done on those rare occasions when scientists of unusual competence become interested in the logic of scientific method. This volume by Dr. Jeffreys, whose special interest is geophysics and who has behind him a first-rate work on *The Earth*, naturally raised high expectations. Unfortunately, physicists sometimes read what philosophers have to say about the logic of physics, so that their own writings often merely fill out with illustrations the outline of arguments suggested by their reading. But while the book under review does not quite fall into this class, its fundamental positions are borrowed from other thinkers without adequate criticism. In spite of many interesting observations which it contains, as a contribution toward understanding the nature of scientific inference, the book is very disappointing.

Although Jeffreys had started from the phenomenalistic position of Mach, he has become convinced that pure phenomenalism is inadequate for scientific needs, and in this book he aims to show "how it is possible to learn from experience and to make inferences from it beyond the data directly known by sensation." Vestiges of an extreme subjectivism still remain, however, even in the formulation of his aim. But inferences about matters of fact can only be probable, never certain, so that Jeffreys recognizes that the nature of probability is central for a theory of scientific inference. He starts out quite bravely with an objective relativistic theory of probability, so that a proposition has to a given set of data one and only one probability relation, to which moreover a real number may be assigned.

It is this "relation" of a proposition to the data which is crucial. Jeffreys maintains with Keynes that this unique probability relation is immediately recognizable under suitable conditions, just as force or color are. Precisely why it is that with the possible exception of authors of books on probability who maintain such a view, no one seems to be able to intuit these probability relations, does not seem to concern Jeffreys. Neither does he indicate what is the significance of irrational numerical values of probabilities, nor how such values are obtainable on the basis of a direct intuition of the probability relation.

But the acid test for an author's views on probability can be found in what he does with Bayes' theorem. No one, of course, can take exception to this formula as a theorem in pure mathematics. Its use to estimate the "probability of causes," however, in most cases depends upon introducing questionable assumptions about equiprobability; and in such cases the probability relation, in spite of a great show of objectivity at the start, soon reduces to a function of our ignorance. And that in fact is just what the theory of Jeffreys does reduce to. For he must employ the notion of a "prior probability" of a theory,—prior, that is, to any verification, and relative therefore to our complete lack of knowledge. Jeffreys admits that the presence in Bayes' formula of functions indicating prior probabilities, has been the standing objection to it. But he thinks he removes the difficulty by the following argument: "It has often been said that assessing a probability implies some knowledge, and that therefore we cannot assign a probability when we are in complete ignorance. This opinion must be directly contradicted. Complete ignorance *is* a state of knowledge, just as much as a statement that a vessel is empty is a statement of how much there is in it. . . . If we have no means of choosing between alternatives, the probabilities attached to the alternatives are equal" (p. 20). Thus we are asked to raise ourselves by our own bootstraps and to get knowledge by bandying words. For Jeffreys' argument—that if we believe we can learn from experience we must accept this assumption about equiprobability—is a complete *non sequitur* (p. 21): to deny that the probabilities of alternatives are equal when we are ignorant about them does *not* deny the possibility of our discovering something about them. There is, of course, a fundamental issue involved. The issue is whether there is any intelligible sense in which a theory may be said to have a prior probability, and whether the proposition that we are ignorant may serve as a premise for inferring another proposition asserting some matters of fact. And if the answer is negative, we must abandon not only Jeffreys' use of Bayes' theorem and Laplace's succession formulae, but also his analysis of the nature of the probability relation.

In the chapter on quantitative laws, Jeffreys shows clearly that a law adopted to explain a set of observations is only one of a possible number of laws that would fit the data as well. Why do we adopt the law that we do? Jeffreys tries to show that it is the "simple" law which is always chosen, because such a law has a greater prior probability of being true than other laws. Simplicity in a law, he argues, is a better guarantee of probability than accuracy of fit (p. 40). Assuming that every quantitative law can be expressed as a differential equation of finite order and degree having integral numerical coefficients, Jeffreys groups these equations so that those with equal values of the sum of the order, degree, and absolute value of the coefficients are classed together. The increasing value of this sum defines the increasing complexity of the laws. The entire argument, however, rests on the assumption that the probability of a verified consequence is the same on each of the laws of a certain type (p. 39). But isn't it just a little too much to ask of our supposed sense for intuiting probability relations, that it should be capable of examining *all* laws (an infinite number) of a certain type, and of judging that the probability of the observed facts is the *same* on all such laws? Moreover, Jeffreys' criterion of simplicity is deceptively simple. For it is easy to see that by introducing a different coördinate system the value of the sum in question can be transformed into any value one chooses, and the "simplicity" of a law turns out to be a matter of employing the proper notation. Unless a criterion of simplicity can be offered which is free from psychologic considerations, it is absurd to associate a (presumably objective) probability value with degrees of simplicity. But how could Jeffreys decide on the basis of his criterion between the relative simplicity of two systems of equations which involve different coördinate schemes? As it is, he offers the most astounding argument for the theory of relativity: Since Hamilton's principle expresses the independence of physical laws from the system of coördinates employed, by the simplicity postulate we are entitled to say that it has a high prior probability; but the general relativity theory expresses the same sort of independence; consequently, relativity theory is *a priori* highly probable! (p. 188). It is difficult to believe, however, that such considerations form any part of the evidence for accepting the theory.

In spite of the questionable nature of the central doctrines of this book, Jeffreys has some very illuminating comments on a number of independent topics. His discussion of "irrefutable" hypotheses (pp. 3, 40), of the difference between induction and deduction (p. 5), of the theoretical basis of "observations" (p. 53), and of the conditions for satisfactory definitions (pp. 111, 131) are well worth reading. His comment on Russell's epistemology is to the point (p. 226), and for readers familiar with the calculus there is an unusually clear

analysis of the sense in which physical laws may be regarded as invariants (pp. 102–103). But the inclusion of much of the material into this book must be set down to bad judgment. The chapter on errors is highly technical and contains a curious and contradictory account of "true values" which Jeffreys believes to be "unknowable" (pp. 53, 105); two chapters on measurement are succinctly done, but suffer because of an inadequate discussion of the process of *physical addition;* and two long chapters, one on Newtonian dynamics, the other on light and relativity, are good accounts, but will hardly be intelligible to the novice for whom some of the other chapters are intended. Jeffreys offers a brief criticism of frequency theories of probability (pp. 219–221), but this gains its chief force from demanding of them what no theory can supply—*certain* knowledge of general propositions dealing with matters of fact.

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Philosophy and Civilization. JOHN DEWEY. New York: Minton, Balch & Company. 1932. Pp. vii + 334.

In a dozen and a half essays on widely different subjects written over a period of years for diverse occasions one does not expect the unity of a treatise. And yet there is detectable here, without much straining, a single theme—a theme which seems to indicate that pragmatism remains as it began more hospitable to idealism than to the newer realistic tendencies. This theme is generalized best perhaps in Dewey's Howison lecture for 1930, *Context and Thought*—which the editors have asked me to include in this review. Thought is neither analysis nor synthesis, nor is it analysis followed by synthesis; but it is analysis inside a moving context. As this context is inevitable, it should be counted significant. Indeed to think that one can tease out ultimate elements that themselves are independent "simples" of being is, under the lure of simplicity, to harbor a great illusion. This way lies sterility—and realism. The elements whereby thought operates are always and ever elements of a context that conditions the eventuation as it does the initiation of intelligence.

In this orientation all the essays fit, some of course more closely than others. In the valuable early article on "Interpretation of the Savage Mind," which many students will be glad to have in this more accessible form, after criticizing Spencer and others for ignoring its actual locus in interpreting the savage mind, Dewey lucidly parades the primitive mentality as context for sophisticated intelligence. "The Practical Character of Reality" and "Qualitative Thought" make colorful the context of intelligence by putting into it the qualities common sense seems to find there. The briefer essay on "Affective Thought" reinforces this conception by an appreci-

ation of art, using painting for purpose of illustration. "The Inclusive Philosophic Idea" defends "social" as the most fruitful category to cover the context of thought as a whole. "Corporate Personality" is an excursion into one sub-category that has been used in both legal and political science to further or to frustrate the "social" as human. "The Unity of Behavior," "Conduct and Experience in Psychology," and "Body and Mind" seek to reëstablish continuity across one great historical dualism. "A Naturalistic Theory of Sense Perception" and "Perception and Organic Action" deal with this problem at its lowest perceptual level and seek by more detailed analysis to make out against epistemology the case outlined in "The Practical Character of Reality," where this popular realistic diversion is damned as a "species of confirmed intellectual lock-jaw." "Appearing and Appearance" and the two legal essays, "Logical Method and Law" and "Nature and Reason in Law," indicate in different domains how thinking actually bridges the breaches that arise in experience, not metaphysically but episodically. The latter essays carry the pragmatic teleology into a field where, but for Mr. Justice Holmes, it has been largely lacking, and seek to make consideration of consequences rather than merely of precedents the *sine qua non* of legal intelligence. The closing essay, "Science and Society," the only one here published for the first time, argues the impossibility of curing the technological ills of a scientific society save with more science and the consequent necessity of conquering the social fields by and for the scientific method. "The Development of American Pragmatism," important enough to justify this second appearance in English, indicates Dewey's conception of the major contributions to this movement—of James's (setting out from English empiricism), of Peirce's (setting out from Kant), and of his own (setting out from Hegel).

The essay "Philosophies of Freedom" attempts fruitfully to connect the older conception of freedom of the will with what the determinists at least since Locke have called the freedom of the man. From the former Dewey salvages as compatible with his emphasis upon continuity "a capacity for deliberately changing preferences. From the latter he borrows "power to act in accordance with choice." He draws these two together in every "trend of conduct that causes choices to be more diversified and flexible, more plastic and more cognizant of their own meaning, while it enlarges their range of unimpeded operation." This possible convergence of the two ideals forms Dewey's third, and own, philosophy of freedom, and constitutes for him the goal of social organization and all enlightened education. The problem of freedom becomes thus a practical rather than a dialectical matter, and one contingent more upon the future

than upon the past. In short, "freedom is a resolute will operating in a world in some respects indeterminate, because open and moving toward a new future."

This persisting sense of a complex whole indicates anew Dewey's practice of the Hegelian method to achieve results of his own. One position is set against another, like antithesis to thesis, and out of these Dewey brings a resultant that is neither, and is yet the best of both. The two historic views of freedom he combines to correct each by the other and to produce an improved third. The triad that everywhere runs through his problems is (1) antecedents and (2) consequents separated and yet connected by (3) strictly unique qualities or individualities that are the consequences of antecedents and the antecedents of their own consequences without ever being exhausted by the one or exhausting themselves in the other. There emerges from the interstices of these relations—which relations it is the business of science to investigate—qualities mutually incomparable, each of which by its uniqueness at once transcends the reach of science and yet constitutes the final justification of scientific analysis. This Hegelian method with pluralistic outcome is advantageous for exposition, but it presents great obstacles to fruitful discussion. Particularly against the realistic preoccupation with the unanalyzably unique, Dewey points to the conditions or results of the unique as crucial for thought. In fact, it sometimes appears (I am thinking of the value argument with Prall and others, though, I fancy, it is also to be found in the earlier argument with McGilvary and the later one with Lovejoy) that Dewey is so devoted an apostle of the whole as always to feel some other part of any given total-situation more important than the part which his opponent emphasizes, and this in no sense from a spirit of contrariety but from a felt necessity of defending the whole by espousing as alone completely relevant the part or parts that in a given case are being overlooked.

Indeed is it not just this devotion to the spirit of the whole, which can never be fully realized in social and economic practice, that has helped instrumentalism under Dewey's generalship to an eventuation surprising to many—to the view that philosophy is concerned with meaning rather than with truth? Primarily, if not indeed only, in art does one get a self-sufficing total-situation. "The full realization," as Dewey himself so well puts it in the essay "Body and Mind," "of the integration of mind and body in action waits upon the reunion of philosophy and science in art, above all in the supreme art, the art of education." The last phrase shows still the predilection to achieve the end of science in the social sphere, and the differential hope of its possibility among the plastic young. But the

first essay, from which the book is named, generalized for the international congress at Harvard this view, i.e., that "meaning is wider in scope as well as more precious in value than is truth, and philosophy is occupied with meaning rather than with truth." Truth is not thereby renounced, indeed is acclaimed indispensable, but after being defined is turned over to science; and "scientific thought itself is finally but a function of the imagination in enriching life with the significance of things."

And this the eventuation for instrumentalism, a movement so frequently interpreted as preoccupied with the logic of means rather than with the appreciation of ends! I remark it not to censure, but to clarify. It ought at last to make unmistakably clear that the pragmatic movement, rising with Peirce its author and Dewey its founder out of idealism, is axiological in motivation. Its interest in means is itself but a means to its interest in ends. Its emphasis upon experience is methodological rather than metaphysical. Negatively, it appears in these background essays as a method of dismissing from philosophy the question as to the nature of things; and, positively, it becomes a locative gesture for the guidance of appreciation. Though Dewey's occupation in these essays is characteristically with method, his preoccupation here, as elsewhere, is with appreciation.

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Property. ERNEST BEAGLEHOLE. New York: The Macmillan Company. 1932. 327 pp.

This excellent monograph is a pioneer "excursus into the border-country lying between psychology and sociology," which should help to provide a much-needed background for future social philosophizing about the ever-acute problem of man and his possessions. It forms the first of a series of Studies in Political Science and Sociology under the editorship of Professors Morris Ginsberg and Harold J. Laski of the London School of Economics. Its approach is wholly anthropological-psychological, "using every fruitful method" of those sciences in the attempt "to lay bare the hidden nerve of irrational animism that binds the individual to the object he appropriates as his own and defends against aggression."

Since the "guiding thesis" of the inquiry is "the assumption of the fundamental unity and solidarity of all animal life," Part I undertakes a survey of available data on property among insects, birds, rodents, and apes. Taking as the mark of interest in property its defense by animals against aggression or spoliation by others, Mr. Beaglehole finds animal property to be limited virtually

to the storing of food by a few species against climatic emergencies, plus a certain amount of collecting motivated by curiosity and esthetic considerations. In spite of many opinions to the contrary, he contends that there is no real parallel, but merely an "apparent likeness," to be found in the acquisitive behavior of men and the lower animals. And "the biological facts are too complex to be explained away in terms of an innate acquisitive tendency." The author significantly adds: "One is sometimes inclined to wonder how many more of McDougall's instincts would survive an equally rigid biological examination?"

Part II deals with the building up of sentiments and unconscious behavior-patterns among the so-called Simpler Peoples, with chapters on Magic, Animism, and Property Values; Sentiments of Ownership in Savage Society; and the Social Patterning of Property Values. Here the author assembles and utilizes a wealth of recently-acquired anthropological knowledge from many sources. It is notable, in view of the recent expansion of interest in the Theory of Value, that he concludes that "the fundamental problems in any consideration of the psychology of property are to be found in the origin and integration of values." Great emphasis is rightly laid upon the non-rational motives in the determination of value, and the preponderant influence of unconsciously adopted social patterns in the "canalization" of economic behavior. Also included in this part are a number of valuable tables summarized from Hobhouse, Wheeler, and Ginsberg's *The Simpler Peoples*, showing the comparative ownership-practices of the principal savage tribes.

Part III has a more miscellaneous character, dealing as it does with various aspects of property in the light of individual psychology: the child's sense of property; its rôle in the development of personality; abnormal property-behavior such as kleptomania; and its alleged, but rejected, Freudian explanation. As the discussion of property reaches the higher levels of intelligence, it becomes increasingly evident that "it is the moulding of human nature by the culture patterns of the different groups which adapts one child to a communist organization of society and another to a Western capitalist society." In the beginning there is no "single unitary soul or ready-made self." The idea of self "is a human construction, an hypothesis, as it were (and, like all hypotheses, never complete but always open to change), whereby, through the selective handling of environmental situations, the implicit underlying conational unity of the self is rendered relatively clear and explicit. This process of development results from the integration of emotional dispositions into stable systems of sentiment grouped about significant focal objects and ideas." The author's comments upon the "shrinkages of personality" due to property losses have a melancholy timeliness

in 1932, just as his notes on corresponding "enlargements and extensions" would have made good reading in 1929.

Throughout the book Mr. Beaglehole's interpretation of man's relation to property objects is soundly functional, so that in his opinion the right to property, as with Hobhouse and Laski, must be conceived as the claim of an individual upon society for "such conditions as are necessary for the realization of his functions." No one can lay down a hard and fast rule about the amount of property, beyond a certain obvious minimum, that will satisfy our needs for security and freedom. The right of property is "indefeasible and unchanging just to the degree that if the individual does not enjoy permanent control of those end-objects satisfying certain of the fundamental needs he will live a thwarted life." Beyond that point, a wide field of debate opens, for which the author furnishes abundant ammunition, but which he does not choose to enter in his capacity of social psychologist. Would that his example were more frequently followed! The book contains a good index and bibliographical note; but the author considers the time as yet unripe for a complete bibliography of the psychology of property.

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Sociologues d'hier et d'aujourd'hui. GEORGES DAVY. Paris. Félix Alcan. 1931. 308 pp.

The five parts of this book have all appeared separately in periodicals, and are reprinted together in order to present a panorama of contemporary French *sociologie* and its immediate antecedents. Of the " essential doctrine " of this " essentially French science," that of Durkheim, however, the author does not pretend to offer a complete account, reserving that task for a later volume.

His introductory essay, dealing with the years 1918–1925, is already familiar to readers of the *Monist*, where it first appeared. Six chapters are devoted to a demonstration of the debt owed by contemporary sociologists (in the French sense) to Espinas, in spite of the latter's arbitrary insistence upon annexing the new science to evolutionary biology. For it was the "*organicisme intégral*" of Espinas which paved the way for Durkheim and the famous "*conscience collective.*" Professor Davy does the latter the service of collecting his scattered pronouncements regarding the family and kinship. From these it appears that, far from deriving society from the family, Durkheim attempted just the reverse,—to show that the family was not a natural grouping but a product of society, an institution the origins of which must be sought in the totemic clan. All types of families are social groupings about powers regarded as

superior to the individual members, and the problem of the family is ever that of discovering what social forces continue, each day less successfully, to keep its component parts together.

Of more immediate interest are the thirty pages in which Professor Davy contrasts the alleged social psychology of William McDougall with the *sociologie* of Durkheim to the marked advantage of the last-named. It appears that McDougall is not even a true social psychologist, but a devotee of individual psychology who has subsequently turned his attention to social problems. Thus to begin with that notorious abstraction, the isolated individual, is to commit an irreparable blunder. Study first of all the mentality of the group, and then the mentality of the individual within it; but never the reverse. To its firm grasping of this truth the French approach to the problems of psychology owes its superiority. Professor Davy sees signs that McDougall recognizes the error of his ways, and is not far from salvation. As for the latter's doctrine of the group mind, it is apparently none other than the *conscience collective* of Durkheim and Lévy-Bruhl. But a closer examination reveals differences between the two, both in inspiration and in final import. McDougall, wavering eclectically between individualism and *sociologisme*, takes his departure, like Espinas, from Darwinian organicism, but is forced to build up his group mentalities from individual members in a vain attempt, the author claims, "to reconcile Spencer and Rousseau." Although his faulty methodology causes him to be guilty of "imprecisions, indecisions and even contradictions," many of McDougall's conclusions are in accord with those of Durkheim's school, and in company with the author we may scent the presence of a number of mere *querelles de mots.*

The concluding hundred pages contain a masterly and sympathetic summary of the three well-known books by Professor Lévy-Bruhl dealing with primitive mentality and constituting a "veritable sociology" by themselves. It is not always realized that Durkheim and Lévy-Bruhl give widely divergent interpretations of primitive thought as related to our own. In the apt metaphor of Professor Bouglé, while Lévy-Bruhl digs trenches to separate the two, Durkheim multiplies bridges to connect them. The author is less concerned to reconcile than simply to exhibit the differences between Durkheim's "dualism of superposition" and Lévy-Bruhl's "dualism of divergence." For, given the requisite methodological orthodoxy for entrance purposes, are there not many mansions in the Gallic heaven of *sociologie*?

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Proceedings of the Aristotelian Society. New Series, Volume XXXI, 1930–1931. London: Harrison & Sons. Pp. 312.

This is one of the less interesting Aristotelian volumes, to a reader on this side of the Atlantic. Any good graduate seminar in philosophy would produce as notable work in the course of a year. We would not say there are no things of value in the volume. Thus we may mention the "In Memoriam—Herbert Wildon Carr," by Miss Hilda Oakeley. Carr is quoted as having said: "I have lived to see the leading exponents of pure science reproached as idealist philosophers." It is good to have so sympathetic an account of one who was a real lover of philosophy. The Presidential Address, by Professor Beatrice Edgell, grapples once again with the difficult question of the nature of "Images." But most of the papers either repeat what the authors have said as well elsewhere, or stop on the verge of saying anything novel, even Mr. Schiller, who writes about novelty.

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JOURNALS AND NEW BOOKS

THE PHILOSOPHICAL REVIEW. Vol. XLI, 4. Value and Its Moving Appeal: *R. B. Perry.* Meyerson's "Critique of Pure Reason": *J. Loewenberg.* Julius Bahnsen: Philosopher of Heroic Despair: *Henry Slochower.* Some of Malebranche's Reactions to Spinoza: *G. S. Getchev.* Discussions:—Of the Nature and Efficacy of Causes: *C. J. Ducasse.* Causality from the Point of View of the Engineer: *R. H. Claudius.*

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NOTES AND NEWS

Two prizes of £50 each have been offered by a member of the British Institute of Philosophy for the best Essays on Nicolai Hartmann's *Ethics* (English Tr., published by George Allen & Unwin, Ltd., London) under the following conditions.

1. One prize to be open to men and women of British birth, wherever resident, under the age of 28; and one to men and women of American birth, wherever resident, under the age of 28.

2. The essays shall be of not less than 100 typewritten quarto pages.

3. They must be sent in before June 1st, 1933, addressed to the Director of Studies, The British Institute of Philosophy, University Hall, 14 Gordon Square, London, W. C. I, with addressed stamped envelope enclosed for their return to the writers.

4. The prizes shall only be assigned on condition of the attainment of a certain standard by the selected essays.

5. The selection shall be made by the Academic Committee of the British Institute of Philosophy.

J. H. MUIRHEAD,
Chairman of the British Institute of Philosophy.